

Open Service Network for Marine Environmental Data

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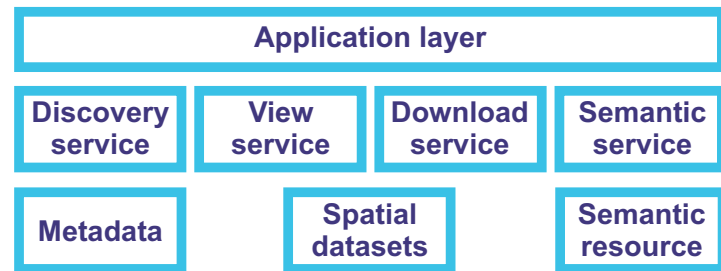
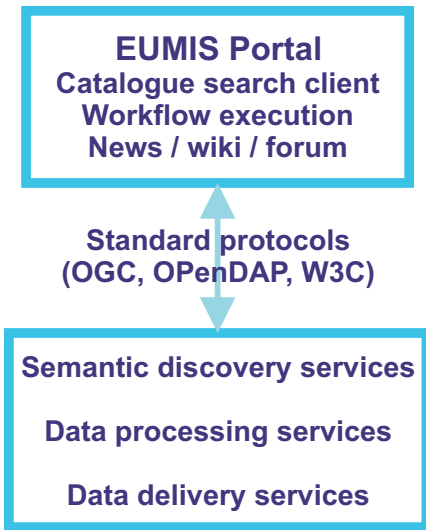
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Overview

NETMAR aims to develop a pilot European Marine Information System (EUMIS) for searching, downloading and integrating satellite, in situ and model data from ocean and coastal areas. It will be a user-configurable system offering service discovery, access and chaining facilities using OGC, OPeNDAP and W3C standards. It will use a semantic framework coupled with a knowledge organisation system for identifying and accessing distributed data, such as near-real time, model forecast and historical data. EUMIS will also enable further processing of such data to generate composite products and statistics suitable for decision-making.

System Architecture



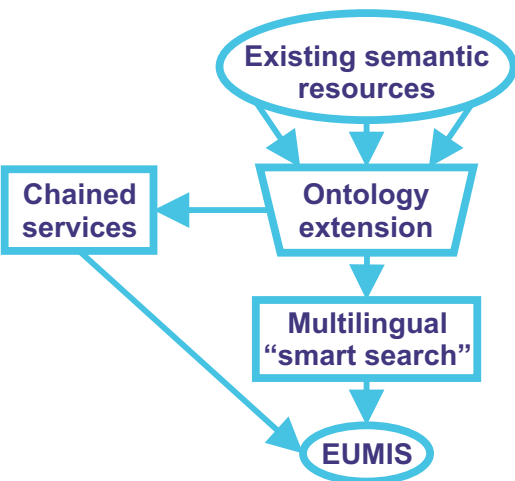
The NETMAR architecture aims to provide a common user interface to both semantic web services and ontologies and to a service chaining editor and workflow engine. It is designed using service oriented architecture and described using the language of the Reference Model for Open Distributed Computing.

Knowledge Organisation Systems

The approach taken to building a knowledge organisation system for NETMAR will be to analyse existing semantic resources and provide mappings between them, gluing together their definitions. The concept of ontology extension is well documented in the domains of computer science, bioinformatics and eLearning, but not in the oceanographic community.

The mappings between the terms aim to provide better support for the construction of client interfaces and web services than those implemented by previous projects.

Tools for the development and population of ontologies will also be provided by NETMAR.



The NETMAR consortium comprises: Nansen Environmental and Remote Sensing Center, Norway; British Oceanographic Data Centre, UK; Centre de documentation de recherche et d'expérimentations sur les pollutions accidentelles des eaux, France; Coastal and Marine Resources Centre, Ireland; Plymouth Marine Laboratory, UK; Institut français de recherche pour l'exploitation de la mer, France; Norwegian Meteorological Institute, Norway.